AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

CLAIM 1. Cancelled.

CLAIM 2. Cancelled.

CLAIM 3. Cancelled.

CLAIM 4. Cancelled.

CLAIM 5. Cancelled.

CLAIM 6. Cancelled.

CLAIM 7. Cancelled.

CLAIM 8. Cancelled.

CLAIM 9. Cancelled.

CLAIM 10. Cancelled.

CLAIM 11. Cancelled.

CLAIM 12. Cancelled.

CLAIM 13. Cancelled.

CLAIM 14. Cancelled.

CLAIM 15. Cancelled.

CLAIM 16 Cancelled.

CLAIM 17. Cancelled.

CLAIM 18. Cancelled.

CLAIM 19. Cancelled.

CLAIM 20. Cancelled.

CLAIM 21. Cancelled.

CLAIM 22. Cancelled.

CLAIM 23. Cancelled.

CLAIM 24. Cancelled.

CLAIM 25. Cancelled.

CLAIM 26. Cancelled.

CLAIM 27. Cancelled.

CLAIM 28. Cancelled.

CLAIM 29. Cancelled.

CLAIM 30. Cancelled.

CLAIM 31. Cancelled.

CLAIM 32. Cancelled.

CLAIM 33. Cancelled.

CLAIM 34. Cancelled.

CLAIM 35. Cancelled.

CLAIM 36. Cancelled.

CLAIM 37. Cancelled.

CLAIM 38. Cancelled.

CLAIM 39. Cancelled.

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CLAIM 41. Cancelled.

CLAIM 42. Cancelled.

CLAIM 43. Cancelled.

CLAIM 44. Cancelled.

CLAIM 45. Cancelled.

CLAIM 46. Cancelled.

CLAIM 47. Cancelled.

CLAIM 48. Cancelled.

CLAIM 49. Cancelled.

CLAIM 50. Cancelled.

CLAIM 51. (Previously presented) A protocol for use in an ad hoc, peer to peer radio system comprising a series of terminals where each said terminal is capable of making at least one of an outgoing call or receiving an incoming call, and where each said terminal comprising computer means, memory means for storing program software means therein, and where each said terminal is capable of being hop of a routing path connecting a call from a source to a destination, comprising:

software means for said memory means of each said terminal, said software means comprising means for generating communications information for transmission based on time-division messaging;

said communications-information comprising a series of time frames (TM) each divided into a series of time slots (TS); said communications-information comprising at least one time slot in which control-channel (CC) messaging information is transmitted, and other time slots in which is transmitted channel data (CD) messaging information;

said at least one time slot transmitting said control-channel information at a first frequency of F0, and said other time slots (TS) transmitting said data channel (DC) information at frequencies of Fl, F2, and F3, respectively;

each said time frame (TF) comprising an inter-frame time gap (IFTG) at the end of each said time frame (TF) in which no communications-information is transmitted, whereby each said terminal is allowed time to perform necessary calculations.

CLAIM 52. (Previously presented) The protocol for use in an ad-hoc, peer-to-peer radio system according to claim 51, wherein said inter frame time gap (ITFG) has a length different than said time slots.

CLAIM 53. (Previously presented) The protocol for use in an ad-hoc, peer-to-peer radio system according to claim 52, wherein the length of each said time slot for transmitting said communications-information is equal to each other.

CLAIM 54. (Previously presented) The protocol for use in an ad-hoc, peer-to-peer radio system according to claim 51, wherein the length of each said time slot for transmitting said communications-information is equal to each other.

CLAIM 55. (Previously presented) The protocol for use in an ad-hoc, peer-to-peer radio system according to claim 54, wherein each said time frame (TF) further comprises a last time slot (LTS); said software means further comprising means for generating initial control communications-information in a respective said last time slot (LTS) of a respective said time frame (TF) indicating initial presence of a respective said terminal in order to start communicating with other said terminals.

CLAIM 56. (Previously presented) The protocol for use in an ad-hoc, peer-to-peer radio system according to claim 55, wherein said software means further comprises means for switching transmission of initial control communications information from said last time slot (TS) to another, free, earlier time slot of a subsequent time frame (TF) in order to reduce the chance of collision with other said terminals also initially registering.

CLAIM 57. (Previously presented) The protocol for use in an ad-hoc, peer-to-peer radio system according to claim 56, wherein said initial control communications-information in said last time slot (TS) and in said another, free, earlier time slot of a subsequent time frame (TF) are transmitted at said frequency F0.

CLAIM 58. (Previously presented) The protocol for use in an ad-hoc, peer-to-peer radio system according to claim 55, wherein said software means comprises means for encoding the communications-information in said last time slot (LTS) using code-division multiple access (CDMA), whereby collisions in said last time slot (LTS) are avoided.

CLAIM 59. (Previously presented) The protocol for use in an ad hoc, peer to peer radio system according to claim 51, wherein said at least one time slot (TS) for said control channel (CC) information is transmitted at a first power level, and said other time slots (TS) for said data-channel (DC) information are transmitted at a second power level.

CLAIM 60. (Previously presented) The protocol for use in an ad-hoc, peer-to-peer radio system according to claim 59, wherein said second power level is equal to or less than said first power level, whereby RF interference is reduced.

CLAIM 61. (Currently amended) A method of transmitting radio calls in an ad-hoc, peer-to-peer radio system comprising a series of radio terminals forming a service group, each said radio terminal comprising transceiver means for transmitting and receiving signals from other like terminals of said series of terminals, computer means and memory means for storing program software means therein, comprising:

(a) establishing a call from a said radio terminal based on time-division access;

(b) said step (a) comprising creating messaging consisting of a series of time frames (TF) with each said time frame consisting of a plurality of time slots (TS);

(c) said step (b) comprising dedicating one said time slot for use as a configuration channel for transmitting information useful in establishing a routing path of a call;

(d) said step (b) further comprising dedicating other of said time slots for use as a data channels for transmitting the actual call information based on the class of service (COS) of the call;

(e) ~~step~~ said step (b) further comprising forming an inter-frame time gap (IFTG) between said time frames (TF) during which each radio terminal may process said data received from another terminal.

CLAIM 62. (Previously presented) The method of transmitting radio calls in an ad-hoc, peer-to-peer radio system according to claim 61, wherein said step (e) comprises making the length of said inter frame time gap (IFTG) longer than the lengths of said time slots (TS).

CLAIM 63. (Previously presented) The method of transmitting radio calls in an ad-hoc, peer-to-peer radio system according to claim 61, further comprising before said step (a):

(f) initiating an outgoing call from one said radio terminal;

(g) said step (f) comprising registering with another said radio terminal for serving as a node in the call connection by transmitting a registration request;

(h) said step (g) comprising initially transmitting said registration message on the last time slot (TS) of a respective said time frame (TF), said last time slot serving as said configuration channel.

CLAIM 64. (Previously presented) The method of transmitting radio calls in an ad-hoc, peer-to-peer radio system according to claim 63, further comprising after said step (h):

(i) selecting in a time frame (TF), subsequent to said respective said time frame in which said registration messaging was sent by said step (h), a time slot (TS) earlier than said last time slot of said subsequent tine frame as said configuration channel for transmitting configuration messaging.

CLAIM 65. (Previously presented) In a protocol for use in a network of terminals each having computer means, memory means for storing program, and software means therein, said software means of each said terminal comprising means for generating communications-information for transmission based on time division messaging, said communications-information comprising a series of time frames (TM) each divided into a series of time slots (TS); said communications-information comprising at least one time slot in which control-channel (CC) messaging information is transmitted, and other time slots in which is transmitted channel data (CD) messaging information, the improvement comprising:

said at least one time slot transmitting said control channel-information at a first frequency of F0, and said other time slots (TS) transmitting said data channel (DC) information at different respective frequencies;

each said time frame (TF) comprising an inter-frame time gap (IFTG) at the end of each said time frame (TF) in which no communications information is transmitted, whereby each said terminal is allowed time to perform necessary calculations.

CLAIM 66. (Previously presented) The protocol according to claim 65, wherein said inter-frame time gap (ITFG) has a length different than said time slots.

CLAIM 67. (Previously presented) The protocol according to claim 66, wherein each said time frame (TF) further comprises a last time slot (LTS); said software means further comprising means for generating initial control communications-information in a respective said last time slot (LTS) of a respective said time frame (TF) indicating initial presence of a respective said terminal in order to start communicating with other said terminals.

CLAIM 68. (Previously presented) The protocol according to claim 67, wherein said software means further comprises means for switching transmission of initial control communications-information from said last time slot (TS) to another, free, earlier time slot of a subsequent time frame (TF) in order to reduce the chance of collision with other said terminals.

CLAIM 69. (Previously presented) The protocol according to claim 68, wherein said initial control communications-information in said last time slot (TS) and in said another, free, earlier time slot of a subsequent time frame (TF) are transmitted at said first frequency.

CLAIM 70. (Previously presented) The protocol according to claim 67, wherein said software means comprises means for encoding the communications information in said last time slot (LTS) using code division multiple access (CDMA), whereby collisions in said last time slot (LTS) are avoided.

CLAIM 71. (Previously presented) The protocol according to claim 67, wherein said at least one time slot (TS) for said control channel (CC) information is transmitted at a first power level, and said other time slots (TS) for said data channel (DC) information are transmitted at a second power level.

CLAIM 72. (Previously presented) The protocol according to claim 71, wherein said second power level is equal to or less than said first power level.